



Turkish Neurosurgery

Official Journal of the Turkish Neurosurgical Society

WFNS
2017
ISTANBUL

WORLD FEDERATION OF NEUROSURGICAL SOCIETIES

XVI. World Congress
of Neurosurgery

August 20-25, 2017
Istanbul Congress Center, Turkey

www.wfns2017.com





Turkish Neurosurgery

Official Journal of the Turkish Neurosurgical Society

TURKISH NEUROSURGICAL SOCIETY

Volume: 27 Supplement September 2017

www.turkishneurosurgery.org.tr

PRESIDENTS

Nurhan Avman	1985-1986
Aykut Erbenli	1986-1987
Özdemir Gürçay	1988-1988
Tunçalp Özgen	1988-1989
Yücel Kanpolat	1989-1990
Osman E. Özcan	1990-1992
Ertekin Arasil	1992-1993
Yamaç Taşkın	1993-1995
Yücel Kanpolat	1995-1996
Nur Altınörs	1996-1997
M. Kemali Baykaner	1997-1998
Kaya Aksoy	1998-2000
Necmettin Pamir	2000-2002
Nurcan Özdamar	2002-2004
Selçuk Palaoğlu	2004-2006
Mehmet Zileli	2006-2008
Ethem Beşkonaklı	2008-2010
Murad Bavbek	2010-2012
Uğur Türe	2012-2014
Zeki Şekerci	2014-2016
Talat Kırış	2016-2017
Şükrü Çağlar	2017-

EDITORS

Tunçalp Özgen	1989-1989
Yücel Kanpolat	1989-1990
Osman E. Özcan	1990-1992
Selçuk Palaoğlu	1992-1994
Nur Altınörs	1994-1995
Selçuk Palaoğlu	1995-1996
Zafer Kars	1996-1998
Kaya Aksoy	1998-2000
Murad Bavbek	2000-2003
Erdener Timurkaynak	2003-2004
Kemal Benli	2004-2006
Hakan Caner	2007-2013
Deniz Belen	2014-2015
Talat Kırış	2015-2016
Selçuk Peker	2016-

Turkish Neurosurgery is indexing in:
SCIENCE CITATION INDEX EXPANDED
INDEX MEDICUS, MEDLINE, PubMed,
Scopus

Impact Factor[®] : 0.56
5yr-Impact Factor[®] : 0.755

ISI Web of KnowledgeSM, Journal Citation
Reports[®], 2016 JCR Science Edition

Editor-in-Chief:

Selçuk Peker : peker@selcukpeker.com

Editors of Sections:

Dattatraya Muzumdar	(Editor of Neurooncology Section)	: dmuzumdar@hotmail.com
Hidekuni Kobayashi	(Editor of Cerebrovascular Section)	: hidek-fchs@kbh.biglobe.ne.jp
Gianpiero Tamburrini	(Editor of Pediatric Neurosurgery Section)	: gianpiero.tamburrini@rm.unicatt.it
R. Kemal Koç	(Editor of Spinal Surgery Section)	: kock@erciyes.edu.tr
Ahmet Bekar	(Editor of Functional Neurosurgery Section)	: dr_ahmet_bekar@hotmail.com
Andreas Unterberg	(Editor of Neurotrauma Section)	: andreas.unterberg@med.uni-heidelberg.de

Associate Editors:

Selim Ayhan	: selim_ayhan@yahoo.com	Yusuf İzci	: yusufizci@yahoo.com
Emrah Çeltikçi	: drceltikci@gmail.com	Hakan Karabağlı	: hakankarabaagli@yahoo.com
Hakan Emmez	: hakanemmez@gmail.com	Hayri Kertmen	: hayri_kertmen@yahoo.com

Medical Ethics Advisor:

Dr. Nesrin Çobanoğlu

ADVISORY BOARD

Aviva Abosch, USA	Murat Hancı, Turkey	Concezio Di Rocco, Italy
Feridun Acar, Turkey	Juha Hernesniemi, Finland	James T. Rutka, Canada
Gökhan Akdemir, Turkey	Servet İnci, Turkey	Burak Sade, Turkey
Nejat Akalan, Turkey	Juha E Jääskeläinen, Finland	Madjid Samii, Germany
Ossama Al-Mefty, USA	Erkan Kaptanoğlu, Turkey	Ali Savaş, Turkey
Nur Altınörs, Turkey	Feyza Karagöz Güzey, Turkey	Daniel Sciubba, USA
Nuri Arda, Turkey	Takeshi Kawase, Japan	Laligam Sekhar, USA
Ali Arslantaş, Turkey	Andrew H. Kaye, Australia	Nathan Selden, USA
Emel Avcı, Turkey	Memduh Kaymaz, Turkey	Franco Servadei, Italy
Şükrü Aykol, Turkey	M. Yaşar Kaynar, Turkey	Konstantin V. Slavin, USA
Mustafa K. Başkaya, USA	Evren Keleş, Turkey	İhsan Solaroğlu, Turkey
Murad Bavbek, Turkey	Douglas Kondziolka, USA	Robert F. Spetzler, USA
Ahmet Bekar, Turkey	Kadir Kotil, Turkey	Alparslan Şenel, Turkey
Ahmet Deniz Belen, Turkey	Basant Kumar Misra, India	Sait Şirin, Turkey
Edward C. Benz, USA	Boris Krischek, Germany	Necmettin Tannöver, Turkey
Mustafa Berker, Turkey	Ali Krisht, USA	Morcos Tatagiba, Germany
Ethem Beşkonaklı, Turkey	Christer Lindquist, UK	Yasin Temel, The Netherlands
Luis Borba, Brasil	L. Dade Lunsford, USA	Nicolas De Tribolet, Switzerland
Kim Burchiel, USA	Jacques Morcos, USA	Uğur Türe, Turkey
Paolo Capabianca, Italy	Melike Mut, Turkey	Tanju Uçar, Turkey
Fady Charbel, USA	Sait Naderi, Turkey	Ağahan Ünlü, Turkey
Şükrü Çağlar, Turkey	Evandro de Oliveira, Brasil	Peter Vajkoczy, Germany
Mehmet Daneyemez, Turkey	Kenji Ohata, Japan	M. Gazi Yaşargil, Turkey
Gilbert Deschambenoit, France	Nezih Oktar, Turkey	Selçuk Yılmazlar, Turkey
İlhan Elmacı, Turkey	Fahir Özer, Turkey	Mehmet Zileli, Turkey
Micheal Fehlings, Canada	Selçuk Palaoğlu, Turkey	İbrahim M. Ziyal, Turkey
Atul Goel, India	Necmettin Pamir, Turkey	
Ziya Gökaslan, USA	Lukas Rasulic, Serbia	
Murat Günel, USA	Guilherme Carvalhal Ribas, Brasil	

Turkish Neurosurgery

Volume: 27 Supplement September 2017

Official Journal of the Turkish Neurosurgical Society

Turkish Neurosurgery is published six times per year by the Turkish Neurosurgical Society (January, March, May, July, September, and November)

Owned and controlled by the Turkish Neurosurgical Society

Copyright owner on behalf of the Turkish Neurosurgical Society:
Şükrü ÇAĞLAR

Publishing Manager:
Tanju UÇAR

Key title: Turkish Neurosurgery
Abbreviated key title: Turk Neurosurg
www.turkishneurosurgery.org.tr

ISSN: 1019-5149
NLM ID: 9423821

Subscription: Sent free to the Turkish Neurosurgical Society members.

Non-members should contact: editor@turkishneurosurgery.org.tr

2017 Non-member Subscription Rates:

Within Turkey 300 TL, Outside Turkey 100 Euro

Publishing Services

BULUŞ DESIGN AND PRINTING SERVICES COMPANY
Bahriye Üçok Caddesi 9/1 Beşevler, 06500 Ankara, Turkey
Phone: +90 312 222 44 06 Fax: +90 312 222 44 07
www.bulustasarim.com.tr

Advertisement: editor@turkishneurosurgery.org.tr

Turkish Neurosurgical Society

Taşkent Caddesi 13/4 06500 Bahçelievler, Ankara/TURKEY

Phone: +90 312 212 64 08 Fax : +90 312 215 46 26 E-mail: info@turknorosirurji.org.tr

www.turknorosirurji.org.tr www.turkishneurosurgery.org.tr

Turkish Neurosurgery

Volume: 27 Supplement September 2017

C O N T E N T S

5 Congress Officers

5 Local Arrangements Committee

6 Senior Advisory Board of Turkish Neurosurgical Society

6 Executive Committee of Turkish Neurosurgical Society

7 Program Committee

7 Chapters

7 WFNS Administrative Council Members

9 Oral Presentations

291 Poster Presentations

637 Index

days before hospitalization. Night before admission to our ward cranial nerve palsies suddenly occurred, as well as drowsiness. Neuro-ophthalmological exam revealed left hypertropia with lateral gaze palsy on the left side and papilloedema. Neurological examination revealed also a left peripheral facial nerve palsy. CT scan showed asymmetric dilatation of left ventricle, hydrocephalus and malposition of cranial catheter. No bone or brain anomalies were visualized. Emergency shunt revision was done immediately after admission – reposition of the ventricular catheter, and reconnection with the rest of the implanted system. The resolution of symptoms of intracranial hypertension was apparent after surgery. Graduated recovery of the abducens and trochlear nerve palsy have occurred in next three weeks, and facial nerve palsy 13 months after surgery. To the best of our knowledge, this is the first reported case of a patient with combined abducens, trochlear and peripheral facial nerve palsy resulting from malfunctioning ventriculoperitoneal shunt. Possible pathophysiological explanation could be a terminal neural decompensation as a consequence of progressive intracranial hypertension in patient with asymmetric high-pressure hydrocephalus.

Keywords: Abducens nerve palsy, Facial nerve palsy, Trochlear nerve palsy, Ventriculoperitoneal shunt

EP-0233 [Pediatric Neurosurgery » Others]

Anterior Temporal Lobectomy with Selective Amygdalohippocampectomy in Patient with Temporal Lobe Epilepsy Due to Focal Cortical Dysplasia: A Case Report

Yunus Kuntawi Aji, Muhammad Arifin Parenrengi
Department of Neurosurgery Faculty of Medicine Universitas Airlangga/Dr. Soetomo General Hospital, Surabaya, Indonesia

Focal Cortical Dysplasia (FCD) is a neurodevelopment disorder which usually associates with intractable Temporal Lobe Epilepsy (TLE) in children. This kind of epilepsy is a difficult challenge for the treating pediatric neurologist. We reported a case of 4-year-old right handed male patient who was referred to emergency department in our hospital with decrease of consciousness after seizure. The patients had history of refractor epilepsy since 3 years before. His brain MRI suggested an FCD. We then did Anterior Temporal Lobectomy (ATL) with selective amygdalohippocampectomy to the patient. There were no seizure and no complication after surgery (Engel classification scale Class I). We find that ATL with selective amygdalohippocampectomy is an effective and safe surgical option for pediatric patients with TLE due to FCD.

Keywords: Focal cortical dysplasia, Epilepsy, Anterior temporal lobectomy, Amygdalohippocampectomy, Pediatric neurosurgery

EP-0234 [Pediatric Neurosurgery » Others]

Recovered Landau-Kleffner Syndrome After Multiple Subpial Transection: Case Report

Franciele Pereira Dos Santos¹, Ana Cláudia Da Silva¹, Caroline Klován², Augusto Valadão Junqueira², Rafael Silva Paglioli², Maurício Marchiori², Bruno Loz², Eliseu Paglioli², André Palmirini³
(1) *Faculty of Medical Sciences, Universidade Federal do Rio Grande do Sul (UFRGS), Porto Alegre, Rio Grande do Sul, Brazil,* (2) *Department of Neurosurgery, Hospital São Lucas da Pontifícia Universidade Católica do Rio Grande do Sul (HSL-PUCRS), Porto Alegre, Rio Grande do Sul, Brazil,* (3) *Department of Neurology, Hospital São Lucas da Pontifícia Universidade Católica do Rio Grande do Sul (HSL-PUCRS), Porto Alegre, Rio Grande do Sul, Brazil*

Landau-Kleffner syndrome (LKS) is a childhood disorder characterized by acquired aphasia, epileptiform electroencephalographic (EEG) abnormalities, cognitive impairment and global behavioral regression. Multiple subpial transection (MST) is an alternative to drug-resistant LKS, but the evidence is controversial as to the benefit on clinical outcome. In this study, we report the case of 4 years old patient with LKS submitted to MST in our service. The girl was born normal and reached all the milestones of development, including expressive language. The first symptoms manifested at 3 years, with focal seizures on the right cheek. Evolved with regression of language for aphasia of expression and behavioral change, characterized by irritability and agitation. EEG obtained in wakefulness before surgery presented a slow basal tracing to the left, spikes associated with slow waves in the left centrottemporal region that radiated to the contralateral homologous region and/or generalized accompanied by body movements and fixed stare. The seizures were controlled with drug therapy, but aphasia remained refractory to this treatment. Multiple subpial transection was performed in the left frontoparietal region guided by transoperative electrocorticography. Before surgery, transoperative electrocorticography showed almost continuous discharges in Broca's region, with extension, in smaller intensity, to Wernicke's region. After the MST there was a significant reduction of discharges in these regions. On the first postoperative day, there was a slight improvement in language, which evolved to complete sentences in two weeks.

Keywords: Landau-Kleffner syndrome, Multiple subpial transection, Neurosurgery

EP-0236 [Pediatric Neurosurgery » Others]

A Case of Intracranial Suppuration with Epidural, Subdural and Parafalcine Collections

Toivo U N Hasheela, Aaron Musara, Kazadi Kalangu
Department of Neurosurgery, University of Zimbabwe, Harare, Zimbabwe

Despite the advances in modern neuroimaging techniques, neurosurgical techniques and newer generation antimicrobial agents, intracranial suppuration, (i.e. subdural empyemas and epidural abscesses), still remains a potentially fatal CNS infection to date. These pus collections still remain a formidable diagnostic and management challenge, often resulting in significant morbidity and mortality. In this case report, a description is made, of a case of a 10

Anterior Temporal Lobectomy with Selective Amygdalohippocampectomy in Patient with Temporal Lobe Epilepsy Due to Focal Cortical Dysplasia: A Case Report

Yunus Kuntawi Aji, Muhammad Arifin Parenrengi

Department of Neurosurgery Faculty of Medicine Universitas Airlangga/dr. Soetomo General Hospital, Surabaya, Indonesia

Abstract

Focal Cortical Dysplasia (FCD) is a neurodevelopment disorder which usually associates with intractable Temporal Lobe Epilepsy (TLE) in children. This kind of epilepsy is a difficult challenge for the treating pediatric neurologist. We reported a case of 4-year- old right handed male patient who was reffered to emergency department in our hospital with decrease of consciousness after seizure. The patients had history of refracter epilepsy since 3 years before. His brain MRI suggested an FCD. We then did Anterior Temporal Lobectomy (ATL) with selective amygdalohippocampectomy to the patient. There were no seizure and no complication after surgery (Engel classification scale Class I). We find that ATL with selective amygdalohippocampectomy is an effective and safe surgical option for pediatric patients with TLE due to FCD.

Keywords: focal cortical dysplasia, epilepsy, anterior temporal lobectomy, amygdalohippocampectomy, pediatric neurosurgery

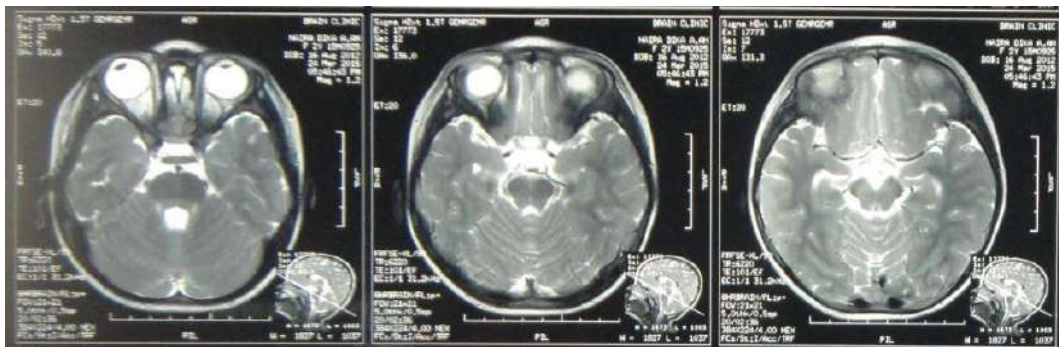
OBJECTIVES

Focal Cortical Dysplasia is the most common cause of intractable epilepsy in children and adolescent, frequently associated with pharmaco-resistant epilepsy.^{1,2} In this group, resective surgery, if possible, is the treatment of choice. This report is aimed to present our successful experience in treating a patient with Temporal Lobe Epilepsy due to Focal Cortical Dysplasia which was managed surgically by Anterior Temporal Lobectomy with selective Amygdalohippocampectomy.

CASE

A right-handed 4-year-old boy was admitted to our emergency department with seizure since 4 days before. Seizure happens for 2.5 minutes eachtime and worsening everyday. The

patient had history of epilepsy for 3 years, controlled by medication. Neurological findings show Glasgow Coma Scale (GCS) score E4V2M5, pupil round equals, positive pupillary light reflexes, and no hemiparesis. Other findings were within normal limit. Brain Magnetic Resonance Imaging (MRI) shows focal cortical thickening with hyperintensity, blurred grey-white matter junction, and flag-like appearance under the sulcus of right temporal region, suggesting an FCD (picture 1). We assessed this patient with Temporal Lobe Epilepsy due to Focal Cortical Dysplasia.



Picture 1

MATERIALS-METHODS

We performed Anterior Temporal Lobectomy with selective Amygdalohippocampectomy to this patient. After induction of general anesthesia, the patient was placed in supine position and the head was turned to the left. The scalp was incised with a question mark shape (picture 2). The temporal muscle was cut beside of the skin incision until zygomatic bone was exposed and flapped with the skin (picture 3). The frontotemporal craniotomy with five burr holes, dural incision with a U shape, and decompression of Sylvian cistern were made (picture 4 & 5). Then, we identified the right temporal lobe.

Lobectomy in the middle and inferior side of the right anterior temporal lobe and selective Amygdalohippocampectomy were done adequately (picture 6). Dura was sutured by fascia graft (picture 7). The free bone flap was returned with three pieces of miniplates. The craniotomy gap was filled by bone dust. The muscle and skin were closed in the usual fashion with drainage.



Picture 2



Picture 3



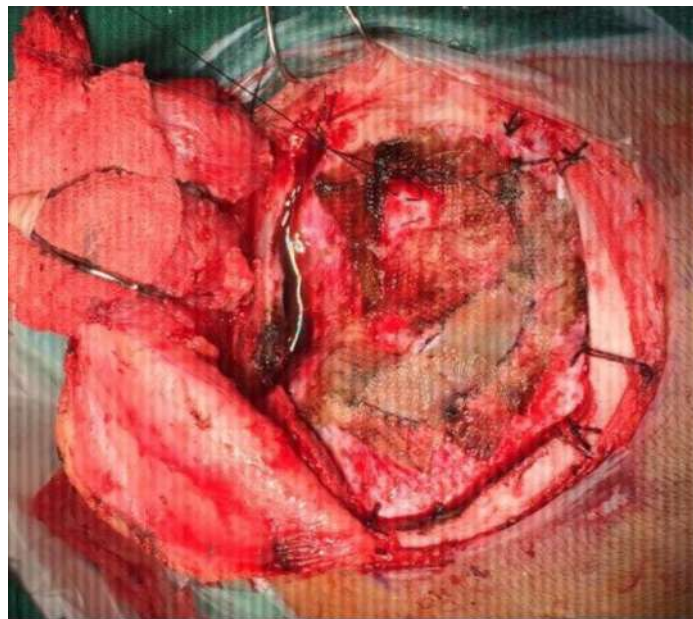
Picture 4



Picture 5



Picture 6



Picture 7

RESULTS

Postoperatively, the patient was routinely followed-up in our outpatient clinics. The patient shows an improvement during follow up, with no more seizure and no deterioration of memory, language, and cognitive functions (Engel's Outcome Classification Class I).

DISCUSSION

Focal Cortical Dysplasia is a subgroup of Malformation of Cortical Development, and is characterized by abnormal cortical lamination and dysmorphic neurons. It has been diagnosed in 20-25% of patients with symptomatic focal epilepsy.³ In surgical series, Focal Cortical Dysplasia is a common pathologic finding with a reported presence in 8-53% of the operated epileptic patients.^{4,5}

MRI is generally the imaging technique of choice for identifying the structural basis of Focal Cortical Dysplasia.⁶ MRI systems operating at a higher magnetic field strength may have added value for epilepsy patients especially because they may have a higher sensitivity for Focal Cortical Dysplasia and decrease the number of MRI-occult Focal Cortical Dysplasias.⁴ Imaging features included focal cortical thickening with T2/FLAIR hyperintensity, blurred and irregular grey-white matter junction, radial band of hyperintensity extending towards the lateral ventricle, subcortical white matter T2 bright areas, decreased signal on T1 of the subcortical white matter, and gyration anomalies.^{4,7}

Surgical area was decided based on clinical findings, radiological findings, and electrophysiology results. The key of successful neurosurgical treatment is localizing the epileptic foci precisely.^{2,9} Anterior Temporal Lobectomy was a treatment of choice to eliminate this kind of seizure effectively. Anterior Temporal Lobectomy with selective Amygdalohippocampectomy has proven efficacious for cessation of intractable seizures of medial temporal lobe origin.¹⁰ Aggressive resection of these structures has been associated with improved surgical outcomes.

CONCLUSION

Anterior Temporal Lobectomy with selective Amygdalohippocampectomy may be the treatment of choice to eliminate seizure in patients with Temporal Lobe Epilepsy due to Focal Cortical Dysplasia. Surgical outcomes was measured by Engel's Outcome Classification. In our case, the patient shows good result after surgery (Engel's Class I, free from disabling seizures).